



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/779,381	02/07/2001	Bidyut Parruck	AZA-001/2001-P001	8000
24941	7590	11/03/2004	EXAMINER	
T LESTER WALLACE 6601 KOLL CENTER PARKWAY SUITE 245 PLEASANTON, CA 94566			SEFCHECK, GREGORY B	
			ART UNIT	PAPER NUMBER
			2662	

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/779,381	PARRUCK ET AL
	Examiner Gregory B Sefcheck	Art Unit 2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 07 February 2001.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-7 and 21 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-7 and 21 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 07 February 2001 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____ .

DETAILED ACTION

- The Preliminary Amendment filed 2/7/2001 is acknowledged. Claims 8-20 have been cancelled.
- Claims 1-7 and 21 are pending.

Information Disclosure Statement

1. The information disclosure statement filed 9/19/2001 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because the "first information disclosure statement" submitted in the IDS filed 9/19/2001 does not provide a copy or listing of a reference. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609 ¶ C(1).

Examiner's NOTE: The second part of the IDS filed 9/19/2001 was received in proper form, with a listing and copy of each reference. The items in this part of the IDS have been considered and a copy of the initialed listing has been provided with this Office Action.

Specification

2. The disclosure is objected to because of the following informalities:

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-7 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kao et al. (US006535513B1), hereafter Kao, in view of Zheng et al. (US006611522B1), hereafter Zheng.

- In regards to Claims 1 and 5-7,

Kao discloses a multimedia and multirate switching apparatus (Title).

Referring to Fig. 2, Kao discloses a line card 202 in the switching apparatus (router) coupled through a first interface to an ATM (cell) or IP (packet) network.

Received data is supplied to local switch module 206 (second interface) that is coupled

Art Unit: 2662

to a cell switching fabric 208 (claim 1,6,7 – first interface coupled to either a cell or packet network; claim 1,6,7 – second interface coupled to switch fabric of router).

Kao discloses a multitude of configurations for interfacing network of varying speeds and media types (Abstract; Col. 1, lines 55-63) whereby data, i.e. ATM (cell) or IP (packet) data, is received on the first interface and converted to ATM cells for output on the second interface to the switch fabric 208 (Abstract; claim 1,6 – first configuration receives data in cell format on first interface and passes through the IC for output in cell format via the second interface; claim 1,6 – second configuration receives data in packet format on first interface and passes through the IC for output in cell format via the second interface).

Kao shows that ATM switching is then performed among the line cards interfaced to the switch fabric. The switched cells are received at the destination line card from the switch fabric on the second interface, converted to the outgoing media type (i.e. remaining ATM or converted back to IP) and outputted on the first interface to the ATM (cell) or IP (packet) network (Abstract; Col. 3-4, lines 60-11; Table 1; claim 1,7 – third configuration receives data in cell format on second interface and passes through the IC for output in cell format via the first interface; claim 1,7 – fourth configuration receives data in cell format on second interface and passes through the IC for output in packet format via the first interface).

Kao does not explicitly disclose the implementation of the line card switching apparatus on an integrated circuit capable of handling multiple data flows received on one wavelength band in a fiber optic cable.

Zheng discloses a quality of service facility in a device for performing IP forwarding and ATM switching (Title). Referring to Figs. 3 and 4, Zheng discloses such a device in the form of application specific integrated circuits on line cards that receive multiple flows of cell and packet data in the same wavelength band on a fiber optic cable (Col. 10, lines 10-45; claim 1,6,7 – integrated circuit on a line card in a router; claim 5 – first flow of cell format data and second flow of packet format data are received onto the line card via one wavelength band in a fiber optic cable; claim 5 – IC in the first configuration for first flow and second configuration for second flow).

It would have been obvious to one of ordinary skill in the art at the time of the invention to adapt the apparatus of Kao for implementation through an integrated circuit for receiving multiple flows of cell and packet data in the same wavelength band on a fiber optic cable. Implementation on an integrated circuit would provide efficient input and output processing of multiple flows over the same wavelength band in a fiber optic cable to the apparatus of Kao for exchanging such data flows among various network types.

- In regards to Claim 2,

Kao discloses a multimedia and multirate switching apparatus that covers all limitations of the parent claim.

Art Unit: 2662

Kao discloses cell data in the format of ATM data, which consists of fixed sized cells, and packet data in the format of IP packets, which may vary in size (Abstract; claim 2 – cell format represents data contained within cells of a fixed size; claim 2 – packet format represents data contained within variable size packets).

- In regards to Claims 3 and 4,

Kao discloses a multimedia and multirate switching apparatus that covers all limitations of the parent claim.

Kao discloses a switching apparatus for redirecting ATM and IP data between networks (Abstract; Col. 2, lines 60-64; claim 3 – router is one of an ATM switch that redirects ATM cells from one network to another network; claim 4 – router is an IP router that redirects IP packets from one network to another network).

- In regards to Claim 21,

Kao discloses a multimedia and multirate switching apparatus that covers all limitations of the parent claim.

Referring to Figs. 4 and 5, Kao discloses maintaining a FIFO queue and for each data path (Col. 5, lines 10-20), and control for scheduling of data transfers from the queue in the egress and ingress modules of the local switching module 206 (Col. 7-9, lines 63-54; claim 21 – IC comprises per flow queue, a scheduler, and a memory manager).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Chong et al. (US 20040028067A1) discloses two-dimensional queuing/de-queuing methods and systems for implementing the same
- Munoz et al. (US006741585B1) discloses interworking of addressing in an internetwork
- Oda et al. (US006522667B1) discloses a network interworking device for IP network/ATM network
- Suzuki (US006330239B1) discloses an exchange apparatus for exchanging data between an asynchronous transfer mode network and an internet protocol communication network
- Honda et al. (US006147999A) discloses an ATM switch capable of routing IP packet
- Bernet et al. (US005764645A) discloses IP/ATM network adaptation
- Watanabe (US005715250A) discloses an ATM-LAN connection apparatus of a small scale capable of connecting terminals of different protocol standards and ATM-LAN including the ATM-LAN connection apparatus

Art Unit: 2662

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory B Sefcheck whose telephone number is 571-272-3098. The examiner can normally be reached on Monday-Friday, 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

GBS
10-27-2004



HASSAN KIZOU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600